UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

SIERRA NATIONAL FOREST HISTORICAL FILE A

COUNTY: INVENTORY NO.: A-5

SUB-HEADING: Employees

ITEM DESCRIPTION:

THE PERSONAL NARRATIVE

OF

ROY BOOTHE,
FOREST SUPERVISOR

Note: This was written when Roy Boothe was Supervisor of The Inyo N.F., but it relates mostly to The first years on Sierra N.F. & Kings River Dist.

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F O R E W O R D

This narrative has been written in response to a request from my first Chief, Gifford Pinchot, for a story of my early experiences in the Forest Service.

The diaries of my first ten years' service had been destroyed, so I have had to depend on my memory, refreshed in some instances by Kodak views, to recall the incidents herein recorded. I apologize for having written so much of it in the first person.

There have been many other incidents and experiences of keen personal interest to me during this period, but I have selected these with the idea of representing a typical cross-section of my earlier Forest Service experiences.

It is hoped that this narrative may be conceded to have sufficient historical value and interest to justify a place in Clifford Pinchot's "Historical Record" project.

I have enjoyed the opportunity to turn back the pages and relive some of my earlier experiences, and the only sad note lies in the fact that so many of the "Old Timers" have crossed the Great Divide, or in some other manner been separated from the official Forest Service family - and a certain personal feeling of depression and disappointment that the Kings Canyon National Park has been created by Act of the Legislature during the period of preparation of this paper, and now awaits only the President's signature to take from the Forest Service the responsibility of administering much of the area in which the scene of this story is laid.

/s/ Roy Boothe
Roy Boothe,
Forest Supervisor

Bishop, California
February 29th, 1940.

THE PERSONAL NARRATIVE OF ROY BOOTHE

PERSONAL HISTORY:

Born in California in 1884, reared in one of its Mother-Lode mountain counties, my only schooling obtained in a one-teacher elementary school and the school of "hard knocks and experience", found me in the Fall of 1906 driving a ten-horse team for my Dad hauling freight to goldmines in the old General Fremont Grant in Mariposa County in my native State. The hours were long (about 4 A.M. to 9 P.M.) and the wages nil except for my board and clothes, and a few dollars per month for spending money. There were no movies and very few other opportunities for entertainment and so when Joe Westfall, our local seasonal District Ranger, approached me at the end of our freighting season about December 1, 1906 with the offer of a job working for him on his foothill stock ranch during the Winter season, I hastily accepted without a quibble about wages or other conditions.

INTEREST AROUSED IN FOREST SERVICE:

Ranger Westfall was the typical Western Cowpuncher type, reckless, self-reliant, and extremely interested in this new job of his. He was District Ranger in charge of the Mariposa District on the Sierra Forest, but at that time no resident supervision was maintained in the Mariposa District during the winter months. As a result of his exceptional enthusiasm, he held informal night school classes at his home during the winter evenings, and he and I, and a young school teacher participating in the discussions of the Forest Regulations, as interpreted in the old "Use Book" of 1906. These were interspersed with, and made more interest by, the inclusion of other subjects insisted on by the wise young school

teacher, who probably realized better than we our shortcomings in Spelling, Mathematics, Spanish and History, etc.

RANGER CONVENTION:

In the Spring, (April, 1907) Charles H. Shinn, the Supervisor of the Sierra Forest, arranged a Ranger Convention at his headquarters at Northfork. Tent quarters were set up, meal service provided for, and the Rangers were called in for this three or four day session, most of them traveling via saddlehorse, and packing their bed rolls on pack mules or horses. Many of them brought their wives. Several men attended from the Washington office, including Clyde Leavitt, F. E. Ohmstead, Coert DuBois, and George Peavy, that I can recall now, - names destined to play important roles in the building and development of the Forest Service. Joe Westfall, in his enthusiasm, which had by that time fired my mind to some extent, insisted that I accompany him to this Convention and try for a job with the Forest Service, and since my Dad had sold his teams and no longer needed me so much at home, I decided to go. It proved a most interesting experience for me, meeting all these people, most of whom were imbued with keen enthusiasm for their new jobs, and the building of this, one of the newest Governmental Services. Mr. Shinn, perhaps the oldest in years, was one of the youngest in point of vision and enthusiasm. Many phases of the work were discussed, and the personnel advised or instructed in the policy and objectives of the Service. At the end of the meeting, Joe and I had a conference with Mr. Shinn regarding my employment, and he agreed to hire me as a Guard, pending an opportunity to take the Ranger examination and qualify for a ranger position in the Civil Service list. When we came to discuss the question of where I would be located, Westfall made a strong

plea for me to be assigned to his district where I was acquainted with the country and people. Mr. Shinn struck a characteristic pose, with elbow on the desk and his chin resting in his palm, his eyes half closed as though in a deep study as Joe proceeded with his plea. Finally, Mr. Shinn interposed with the question, "What do they call him up there?" and when Joe answered "Roy", Mr. Shinn said, "Huh! We'll send him to the Kings River Country, where no one knows him. They will call him 'Boothe' down there", and so it was decreed, and further argument failed to move him.

KINGS RIVER ASSIGNMENT:

The Kings River assignment proved to be an isolated one for a youngster, and time dragged rather heavily. There were no towns or community centers in the entire district, practically no roads, and all travel was by saddle and pack horse. There were several cattle permittees using both winter and summer range, and District Ranger Dahl, assigned to administer this newly created district, and I, arrived just in time to join the stockmen in their Annual Spring Roundup, or Rodeo. I had had considerable training in handling cattle on the open range and the fact that I rode a stock saddle built by the best saddle maker in California, and was riding a promising hackamore colt, helped materially in my being accepted by these stockmen as one of them. Most of them had come originally, or their parents before them, from Tennessee or Kentucky, and brought the spirit of Southern hospitality with them. They soon accepted me and made me feel perfectly welcome in their homes or their camps.

TAKES CIVIL SERVICE EXAMINATION:

In July, 1907, I received word that a Civil Service Examination for the position of Forest Ranger would be given at Northfork, and I was one of a class of about 15 applicants to take this examination. In those days the Forest Ranger examination consisted of questions on practical experience and field demonstration of some of the problems that Forest Rangers came in contact with. The written section of the examination was quite simple, and the field section including saddling, riding and packing horses, and simple survey work with a compass. I was notified in November that I had received a passing rating, and was appointed an Assistant Ranger under Civil Service on the Sierra Forest.

EXAMINES JUNE 11TH CLAIM:

In December, 1907, I was directed by the Forest Supervisor to make an examination and report on an application for a June 11th Homestead in the Middle Fork of Kings River, at Tehipite Valley at an elevation of about 4000 feet, but in order to reach this location it was necessary to travel over ranges more than 8000 feet in elevation. The applicant, a man by the name of William Luce, accompanied me on the trip, which required about five days. We had a pack mule to carry our camp equipment and beds, and found in high elevations that some of the streams were already frozen over and in some places considerable snow had to be negotiated. It developed that the place that this man had in mind was an area with practically no agricultural possibilities. It did seem, however, to have potential possibilities for the development of hydro-electric power, and certainly was most outstanding in its rugged grandeur and beauty.

In those days the Tehipite Valley was probably not visited by more than 25 people annually. It was a fine example of primitive wilderness, and while it is visited by more people now than at that time, it has not yet been desecrated by any man-made developments, and is still just as wild and primitive as it was then.

On the morning after our arrival at Tehipite, we woke up to find the temperature modified, and a strong south wind blowing heavy clouds over the peaks and cliffs that rose a sheer 6000 feet or more above us. We decided that a snow storm was probably in the making, and hurriedly finished the examination of the area, packed our mule and began our return to Trimmer, some 35 to 40 miles distant, by rough mountain trails. Dark overtook us at an elevation of about 8000 feet, so we tied our horses to trees and spread our bed under a fir tree bearing the heaviest branches and foliage that we could find. In the morning we awoke with at least a foot of snow on top of our bed canvas, and after some difficulty succeeded in building a fire and cooking our breakfast, after which we resumed our journey, arriving at Trimmer late that evening.

On my return to the Supervisor's headquarters at Northfork, all the conditions of the area applied for were discussed with Mr. Shinn, and we fully agreed that the public interest demanded that the application be rejected and its ownership and administration be kept under Government control. This incident is recorded as an illustration that even at that early date it was an established Forest Service policy to carefully weigh public interest versus private interest.

EARLY INFLUENTIAL FACTORS:

Pioneering the early development of the Forest Service and its administrative policies was very different from the present day activities and the greatly expanded field of Forest influences. Then, practically all field travel was accomplished on horseback or in some instances in buggies, buckboards or spring wagons. Roads and automobiles had not yet been developed to the point where one could be at all sure of reaching his destination in an auto, and so a ranger district was usually much smaller than the present district, although the volume of work to be handled was only a small fraction of a modern ranger's responsibilities. Certainly there has been a strong tendency to increase paper work requirements during the past ten years or so, with some attempt developing quite recently to check this trend.

During the winter of 1907 and 1908 most of the permanent personnel of the Sierra National Forest were concentrated in the near vicinity of the Supervisor's headquarters where a start was being made to develop headquarter improvements at several of the nearby ranger stations. Bachelor quarters were established where 12 or 15 of the younger men lived, each taking their detail as Cook for a week or two. This plan of community living afforded an opportunity for the building of the foundation of some fine friendships that have continued through all these more than thirty years of official and semi-official contact.

Perhaps no single factor has contributed more to the degree of popularity or general public confidence enjoyed by the Forest Service thru all its history than the personal qualifications of its personnel. This was especially true in its earlier history when the Service was

regarded with more or less apprehension or even suspicion by practically all its users and local residents. The creation of the National Forests had put a stop to acquisition under the public land laws of timber and grazing land and restricted the loose manner in which homesteads were being filed on land of questionable agricultural value. The Act of June 11th, 1906, permitted an applicant to acquire patent to land that was clearly of agricultural character, however, and in most instances fairly liberal interpretations were made by examining Forest Officers. The regulations from the beginning permitted the free occupation and development of mineral lands.

Fortunately for the Forest Service, its first Chief and his associates in Washington recognized the importance of exercising a great deal of care in selecting the field personnel and setting up high standa of performance of personal and moral character. In spite of this recognition there were bound to creep into the organization a few employees who lacked the personality and strength of character to build and maintain respect for this new Federal organization. To strengthen its technical staff, many young Forestry students or graduates were selected, mainly from the Eastern colleges, and sent into the field on the Western forests to gain practical experience in the different phases of forest administration. It was inevitabl that some of these would prove to be misfits in this strange invironment, but it was principally from this group that the future leaders and moulders of our National Forest policies were to be developed.

RETURN TO KINGS RIVER:

In the spring of 1908 when it came time for the Field force to

return to their regular jobs of administration, a new District Ranger, George Cavin, was selected to administer the Kings River District. My personal preference would have been to secure an assignment in one of the other districts on the Forest where there was a little more opportunity for social enjoyment and public contact, but this time Mr. Shinn used the argument that my previous seasons experience in the Kings River District would be valuable to the new District Ranger and insisted that I return for at least another season until he became better acquainted with the work and the people of that section. Cavin proved to be a man very different in character and personality than Dehl, my previous District Ranger. He was a stickler for detail, exceptionally close in the handling of his personal affairs, and although neither of us were married at that time he seemed to want to save every penny of his salary that he possibly could, with the result that while we camped together most of the time, we lived very frugally. Finally, my patience became exhausted, and I told him that I was going to buy my own supplies and camp by myself unless he would agree to be more liberal in the purchase of food supplies. Other little personalities of this type, and his rather sarcastic manner of giving instructions to me made that season's work, so far as I was concerned, much less pleasant than had been the previous one. Perhaps it was a good lesson for me, however, because he at least taught me that I must give consideration to the other fellow's point of view as well as my own, and after a few months our personal relationship began to improve, and in a few years had developed to the point where I regarded him as a very good personal friend.

During the winters of 1908 and 1909, Supervisor Shinn decided that winter quarters should be established in the Kings River District, and year-

long administration provided for. A Ranger named Parkinson, who was employed seasonally on timber sale work, was also assigned to the Kings River District, and we three spent a very pleasant winter developing our new quarters and surveying the location of ranger stations, and June 11th claims.

During the summer of 1909 my time was principally occupied with range management and administration, and maintenance of trail systems in the back country. I had charge of a small crew of men for a couple of months and some of the most dangerous places in the Kings River trail were improved. By this time I was getting well acquainted with practically all the stockmen in that part of the forest, riding with them and camping on the range with them, as though I were one of their employees, but striving always to get over to them some of the phases of range management which were beginning to be developed in those early stages of formation of forest grazing policies. The extension of telephone lines into the back country was just getting started, and through the cooperation of stockmen who did the packing free of charge, the telephone line was extended into Crown Valley, one of the most remote cow-camp headquarters on the Sierra Forest.

RANGER SCHOOL AT DEER CREEK HOT SPRINGS ON THE SEQUOIA:

About the last of September, 1909, I received a phone call from Mr. Shinn to report to headquarters where he discussed with me the forest administrative job and my reaction to Forest Service work after these 1½ years of experience. He then told me of a plan to hold a ranger school at Deer Creek Hot Springs on the Sequoia Forest, and said that he had decid

to send me to represent the Sierra Forest at this, one of the first ranger schools ever to be held. I arrived at Deer Creek, which was the summer headquarters for the Sequoia Forest about September 20, 1909, and found that school headquarters had been established by E. A. Sherman, who was then Supervisor of the Sequoia, and that there were to be about twenty rangers in attendance. The instructor personnel consisted of the Chiefs of the several branches of Forest activity in the District Office, which had by this time been established at San Francisco, and from additional personnel detailed from time to time from the Washington office. This assignment was undoubtedly a lucky break for me and all the other rangers who were fortunate enough to be sent there. Most of our instruction was practical and helped us a lot to broaden our conception of the Service as a whole, and its standards and traditions. It gave us the opportunity of some fine contacts with Rangers from all sections of California where the problems were quite different, and with a good many of the men who were responsible for the early development of forest administrative policies.

TAKES A BRIDE:

Mrs. Sherman proved to be a very fine hostess and I think everyone was sorry when our school days were over and we had to return to our jobs. For me, perhaps, there was just a little different attitude, because I went to Tuolumne, in Tuolumne County, and was married before returning to my headquarters. Whether the acquisition of a wife had anything to do with it or not, Supervisor Shinn informed me upon my return that he was establishing a new Ranger District from part of the original Kings River and Pine Ridge Districts, and that I was being promoted to District Ranger status. I was given a young chap by the name of Hugh Downey for an Assistant that winter,

and we found plenty of work to keep us busy in the improvement of our quarters, and the surveying of private lands, homestead claims and Indian allotment claims in our District.

The Indian Service was making a special effort to assign all the heads of families of the local Indians with parcels of land called Indian Allotments, which were covered by Patents in Trust to the land that these Indians or their forefathers had been living on for, in some cases, many generations. We had some rather interesting experiences in laying out these tracts of land, which covered from 20 to 100 acres, and found the Indians to be rather curious and very much interested in the locations of the corners which we established, and later in the delivery by us as the Agents for the Indian Service, of the Patents in Trust. Few of them could write their own names, and so it was necessary for their thumb prints and witnessed mark to be obtained on the receipts, which had to be returned to the Indian Service as evidence of delivery of Patents to the Indians. These patents were to entitle the Indians to occupancy of the land for a period of 25 years, but did not give them title in full, nor authority to dispose of it in any manner. If, at the end of the 25 year period, the Indian or his immediate heirs were still occupying it, it was understood that the Government would then issue the final Patent. I do not have first hand knowledge of how many final patents have been issued in these 25 or 30 cases that we handled that winter, but feel safe in saying that probably less than 5% are now occupying or making any use of this land. The Indian has gone through the same trend of concentration in Reservations or central villages that his white brother had in the establishment and development of cities and towns throughout the land.

It was about this time that M. A. Benedict arrived on the Sierra by transfer from the Plumas, and was assigned Assistant Supervisor under Mr. Shinn. We soon found that Benedict had a very fine personality and a keen interest in the domestic problems of the entire personnel on the Sierra. He was full of energy and enthusiasm in the Forest Service and the job of its administration, and so almost from the beginning he was accepted as one of us. Throughout his long service as a Forest Supervisor, these qualifications of personal interest in his subordinates, and his untiring efforts to improve their efficiency in the Service and their living conditions, have made him one of the most popular supervisors in the California Region. He was also one of the first Supervisors in California to develop the idea of specific training, to improve the efficiency of the personnel. He was never bound by hard and fast adherence to established procedure, and he therefore, in my opinion, contributed much to the building of Service Administrative Policy. As an example, he was one of the earlier advocates of a modified Specialist system of administration. For several years he advocated the trial on the Sierra Forest of a plan which would make, for instance, the ranger who was best qualified to handle grazing assume the full responsibility for its administration on the Forest. The man best qualified to give general supervision to Fire Control would assume the same responsibility for that activity. Another man, who was especially qualified by his training and interest, in improvement work, would advise and direct the other men in the construction and maintenance of all improvements, and so on through the several other important activities.

In those days there were no relief administrations, or sources of cheap labor, so it was necessary for the Rangers to act much more in the capacity of "doers" than is the practice now. Benedict himself was never happier than when he could don a suit of Coveralls and put on a set of tree-climbers and join a telephone construction or maintenance crew of rangers, assume the controls of a Road Grader, truck, or tractor on a road construction or maintenance job, or any of the actual performance jobs in the Service. He was sometimes criticized by his Superiors for this tendency, which they felt hindered or perhaps detracted, to some extent, from his ability to exercise broad supervision of his job, and to maintain the proper respect of his subordinates. It is my opinion that this tendency gave him the opportunity to develop a much more practical and thorough knowledge and understanding of the mechanics of the job than he could possibly have ac ed had he never done any of these things personally, and even after one has learned the primary principals of performance, I think it is good business for an Administrative Officer to get right into the job occasionally, in order to keep his hand in and keep up with trends of improved methods of performance.

Perhaps the best practice is to follow the "middle of the road course" and be certain that one does not get bogged down in the mechanical performance to the detriment of Supervisorial performance.

NEW SUMMER HEADQUARTERS:

In the Spring of 1910 it became necessary to develop summer headquarters for this new district which had been established, and so all the time that could be spared by my assistant and I from our regular administrative duties, was occupied in the development of our new summer quarters

Dinkey, in which we got another excellent lesson in self-sufficiency. Supervisor Shinn gave his approval to the construction of a log cabin, and gave us the magnificent appropriation of $5.00 with which to finance it. Both Downey and I had had considerable experience in actually working in the timber, and so we hewed the logs, rove our own shakes, built our fireplace, and highgraded from an old abandoned logging camp enough lumber to use for flooring, sheeting and ceiling. The $5.00 was spent for nails. During this first season, of course, we occupied tent quarters, and our Ranger Station was about a half mile from the cow camp of the Dinkey cattle permittees. The range had a carrying capacity of 700 or 800 head of cattle and the two permittees had large families of youngsters, some of whom were in the High School and College stage. We established a Community Campfire system whereby some 15 to 30 young people would gather about a big campfire nearly every night, either at the ranger station, the cow camp, or the small public camp ground down on the creek, where already some public camping was coming into existence. Some of the young folks had musical talent, my wife played the violin, and I learned a few chords on the guitar to be able to accompany her for campfire purposes. One or two of the cattlemen could also play stringed instruments, and so the social phase of our assignment at the Dinkey Ranger Station for the next few years constitutes one of the pleasantest memories of my life.

FIRE SUPPRESSION:

It was in August of that year that I got my first training in assuming the full responsibility for suppressing a big timber fire, which occurred on Dinkey Mountain, and covered several thousand acres,

We got some valuable aid from cattle permittees, who in that district wer always fire-protection conscious, and strongly opposed to the light-burning tendency so prevalent in much of the mountainous sections of California. We also employed some crews from the logging camp some 10 or 15 miles distant. Limited shifts of eight or even sixteen hours were unthought of in those days, and when fires occurred, the men who assumed the responsibility of leadership and control, usually camped right on the fire line until the fire was finally controlled, regardless of whether it was accomplished in one day or ten, snatch ing a few winks of sleep when they became so exhausted that they could not continue any longer, and often eating very irregularly. That method of control was, of course, far from scientific, but was probably much cheaper than the present day system of rushing much larger crews of highly supervised and organized firefighters to practically all fires that occur. Acreage bur and damaged was, of course, usually greater than under the present system.

LOST IN THE SNOW:

This recalls to my mind another incident which occurred about the first of October of that fall in the preparation of moving from summer quarters to winter quarters. We had already begun to follow the practice of letting down the barbwire on our pasture fences over the winter season, to avoid heavy breakage by snow, and after finishing our job, in about one foot of snow, of letting down the wire on one of our pastures, we decided to try to find a Buck on the way back to headquarters. I crippled one within a short distance of the pasture, and decided to follow it down the mountain side towards camp, while Claude Barker, my assistant, led my saddle horse back to camp with him. I told him that I would go on into camp on foot, but soon after I began to follow the wounded deer, snow began to fall and my

vision was restricted to a very small horizon. I followed the deer trail for a couple of hours or so, under the false impression that I was traveling towards camp all the time, and finally the trail brought me to a tall, leaning snag which, all of a sudden, took on a familiar appearance, and after carefully observing this snag, I was convinced that it was a particular snag which had been immediately adjacent to one of our fire camps of the previous summer's fire-suppression job, and was considerably disturbed to realize that I was some four or five miles from camp, instead of about one mile, as I had supposed. With dusk rapidly approaching, and the trek through four or five miles of snow-covered mountains facing me, I oriented myself and headed toward camp, where I finally arrived about 9 P.M., a very tired and worn-out ranger. My wife and Barker were, of course, very much concerned as to what had happened to delay me in my return, but hot coffee and food soon revived me.

This incident is given as an example of what one can do to train himself in the powers of keen observation of conditions of nature. It is very doubtful, indeed, that a man who had grown up in a city would have developed his powers of observation to this extent, and thus would have faced, at the least, a night of exposure in rather severe climatic conditions, and possibly something very much more serious.

I have known men who have spent their entire lives in the mountains, and outdoors, to have developed this power to a very keen degree, indeed. The least disturbance of the ground cover of pine needles, or other duff, would not escape their well-trained eyes. It is a trait that the Indian has been given a great deal of notoriety for, but some of his white brothers had it in almost the same extent.

A BEAR STORY

Another incident most distressing to my wife is also recalled by the recollection of occupation of our Ranger Station at Dinkey. Our only method of transportation in that, our first year of married life, was by saddle and pack animals, and in moving our meager earthly possessions from summer to winter quarters, I was traveling up the trail leading the pack animals, and my wife following along a few hundred feet behind, when suddenly I sighted a small-sized bear ahead of me in the trail. I called to my wife to come up and take over the pack stock while I gave chase to the bear on my saddle horse, and soon succeeded in forcing him to climb a tree. He refused to stay up, however, and would only climb some 20 feet or so on the side of the tree, and would then come sliding back to the ground.

I would yell and take after him, and being mounted on a good saddle horse was able to crowd him so closely that he would have to take to a tree again very quickly. After forcing him to take about a half dozen trees, he finally decided to stay up, and since there was no legal protection given to bear in those days, (they were considered to be something of a predator on domestic stock) I decided to kill him. I shouted to my wife to tie the pack stock up and come on up to where I was, which she did. After killing and skinning the bear, we started to return to the pack stock when we heard a great commotion down there, and learned that one of them had become frightened at the scent of the bear and broken loose in a mad flight back to Camp, a couple of miles distant, without regard to what happened to the pack. My wife's violin had been tied on top of the pack, and this animal had run into a tree or limb at almost the start of her fli and

broken the violin into perhaps a hundred pieces. The violin, of course, was one of my wife's dearest possessions, and when I finally returned with the pack animal, which I found at the ranger station, I found my wife in tears over the loss of her fiddle. The rest of the afternoon was spent in gathering up our possessions, which were scattered for the distance of a mile or more through the woods, and a new start was taken the next morning.

CHAS. H. SHINN IS RETIRED AS SUPERVISOR:

Early in 1911, or possibly in December, 1910, it was decided to retire Mr. Shinn as Supervisor of the Sierra National Forest, and give him an assignment which would not be so exacting from a physical exertion standpoint, and soon after this Paul G. Redington was appointed Supervisor to fill this vacancy. He came to the Sierra from the Denver office, Region 2.

PAUL G. REDINGTON ASSIGNED:

The difference in the personal make-up of these two men was about as far apart as the East is from the West. Mr. Shinn was the idealist type of Administrator, thoroughly impractical in many of his viewpoints, but with many fine qualifications that went far to offset his weaker points. Mr. Redington was alert to the point of being almost sharp in his manner, and with excellent administrative, organizational ability. Our first impression was that he had an exaggerated opinion to some extent, at least, of his own importance, and that he lost few, if any, opportunities to impress the Sierra personnel that he was the Boss. As an example, illustrating this, I cite the following:

During the month of June, 1911, it was decided to construct a fire look-out station on what was known as Old Baldy, on the boundary line

between the Pine Ridge district and my ranger district. With funds for this purpose very limited, Chester Jordan, District Ranger in the Pine Ridge District, the look-out man, and Ranger Thrower, who was working under Jordan's supervision, and myself, constituted the crew that undertook this project. At that time Jordan had an excellent span of small work mules and I had a team of good sized horses and a light wagon. We rigged up a four-horse team and hauled the lumber and material as far as we could possibly get over the rough roads, and then after a little clearing of a way route, we dragged the material to the summit of Baldy, using the front wheels and axel assembly of my wagon to hold up the front end of the lumber as we dragged it up over the rocky mountainside.

Our field camp was located some three miles below the summit of Baldy, and on arrival in camp about dark one evening, after working on the Summit of Baldy all day we received a telephone call from Mr. Redington who was very much exorcised at a report of a smoke which had been sighted by the Shut-Eye Lookout down in the lower portion of Jordan's district. Mr. Redington asked if we had seen this smoke, and when told that "Yes, we had been where we could look right down on it, and watch its progress all day", he indignantly wanted to know why we had not gone down and investigated it. We told him that a Homesteader by the name of Miller had informed us a few days earlier that he was going to clear a small piece of land for potatoe farming, and that if we saw smoke there, we need not be worried because he would have it so that it could be burned safely. We

were within direct vision of the smoke, and could see that it was not spreading to the adjoining area, but was under control during the entire day. This did not satisfy Mr. Redington, however, who insisted that whenever a smoke was sighted we must know, without any guess-work, that the fire was under control, and he insisted that we saddle our horses and ride some ten or twelve miles that night to see about the fire, and make sure that it was being handled safely. Although the night air was cold at that elevation, I feel sure that there was blue smoke in the air all the way to and from that fire, as Jordan and I rode most of the night to investigate the matter! On arrival we found nothing but a few heaps of coals exactly as we had expected, and we felt certain that Mr. Redington had done this with the idea of forcefully impressing us with the fact that he was the Boss. During the first year or two of his administration there were a good many examples similar to this one, but as time went on he apparently gained more confidence in the ability of the personnel to assume responsibility and use their own judgement, and within two or three years had gone far in the direction of delegating responsibility to all those who had demonstrated their ability to assume it.

Perhaps no man in the Forest Service had a greater love for the back country than had "P.G.", as we later learned to call him. I think he also got as great a kick from fly-fishing as any forest officer that I have ever been out with, and so he spent a large proportion of his time exploring and looking over the back country of the Sierra National Forest, and as I grew to know him better, I came to enjoy all my trips with him, partly at least because of his great enthusiasm and interest in those pack trips. Mr. Redington was rather a stickler for strict conformance to

the literal enforcement of Forest Regulations and policies, but when convinced that slight modifications could be made in the mutual interests of the Service and the user or permittee, he was willing to do so. I was sorry, indeed, to see him leave the Sierra when he was transferred as District Forester to Region 3 some five years or so later, and equally glad when he came back to Region 5 as its District Forester in about 1920. On his transfer from the Sierra, that vacancy was filled by Mr. Benedict, who had been assigned to the supervisorship of the California Forest for the past two or three years, and so the personnel of the Sierra was, of course, very much pleased that they were getting a man of Benedict's calibre, and with whom nearly all of us were already well acquainted.

I feel that I have been most fortunate in the opportunity to have served under only three Supervisors, but each of them outstanding at least in many phases of their administrative ability, and certainly all of them fine types of men, and with the ability to inspire their subordinates with enthusiasm and a high standard of performance and regard for the Service.

GRAZING PERMITTEES:

In general, the grazing permittees of the Sierra Forest were the type of men that are often referred to as the "salt of the earth", and gave Forest officers little opportunity for criticism. There were, of course, broad differences in the personalities, and sometimes even in the moral standards of the early permittees.

THOMAS J. OCKENDEN:

Thomas J. Ockenden, was a man of rather peculiar characteristics, born and reared an English subject in New Zealand. He came to America as a young man with a determined ambition to make the most of his opportuni

and particularly to acquire his full share of worldly goods. He had been well educated and his business ability was developed to a keen degree. About 1915 he bought out one of the oldest established permittees in my district, and became one of my permittees. He operated a store and resort at Pine Ridge, and through purchasing my groceries from him for several years, I was pretty well acquainted with him as a storekeeper. He was not the Western stockman type at all, but rather the indoor business man type, although he had already acquired much land and was fairly independent. He had many small or picayunish characteristics in his methods of dealing with other men, and for this reason was disliked by practically all of the stockmen. He gave orders to his range manager that he was to understand that he was working for Tom Ockenden, and not for the interests of any of the other stockmen, with the result that the other stockmen soon came to actually hate him, and in the Fall roundup of adjoining ranges, if they found some of Ockenden's cattle that had strayed to their range, they often cut them out, and left them on the range rather than to take them out with their own stock, as they would have done with any other adjoining permittee.

When Tom learned that some of them were doing things like this, he came to me more or less in a complaining manner, and asked me why, in my opinion, the other stockmen were going out of their way to "do him dirt". I invited him into the little ranger station office, and we talked very frankly for perhaps two hours, and during this discussion I tried to point out to him some of the inherent characteristics of the Western stockmen, and particularly those characteristics of hospitality and

big-hearted friendship for which they, as a whole, have always been outstanding. I cited several instances in which his Range Manager, or hired man, had done things which did not measure up to the stockmen's established ethics, and tried to point out to him that broad principles of "give and take" would certainly pay big dividends to any stockman operating under the open range conditions.

At the end of our discussion Tom shook hands with me and said, "Roy, I appreciate this discussion more than anything that has occurred in my life in several years". He said, in effect, "I think you have pointed out some basic facts that I had completely overlooked in my dealings with my associate stockmen, and from now on I am going to do my utmost to see their point of view as well as my own, and see if I cannot cultivate and win back some of the friendships which I have lost through a selfish and narrow-minded attitude."

From then on, as long as I had any dealings with Tom Ockenden, despite the fact that we had many rather serious differences of opinion, we were always able to settle them openly and frankly, and generally with satisfactory results to both of us. I will cite some instances to illustrate.

There was a holding corral at Dinkey where all the cattle enroute to their summer ranges were held overnight, and counted out by me in the morning. One spring, in counting Ockenden's cattle, I found that he had approximately 100 head more than authorized by his permit, which as I recall, was for 700 at that time. When I told his range manager that my count showed that he had 100 head of cattle more than authorized by

his permit, he admitted that my count was correct and said that he had told Tom when he made his application that he should apply for 800 instead of 700. On my next visit to Pine Ridge for mail and supplies, this matter was taken up with Mr. Ockenden, who flared up and became very angry because I seemed to question his integrity. I told him that he could do one of two things; fill out and submit an application for an additional 100 head, which the range was qualified to carry, or remove them immediately from the Forest. The cost of the latter would have by far exceeded the grazing fee, which was only 40 or 50¢ per head at that time. He declared that he would gather 100 head and bring them out, but when I started to leave the store he called me back and said that he wanted to apologize to me, and that if I would permit him to he would gladly fill out the application for the additional 100 head, which indicated to me that he had really thought that he could bluff me into acknowledging that I had made a mistake in counting his cattle when I was absolutely certain that no mistake had been made, which fact was fully agreed and admitted to by his own range manager.

Another incident which threatened to disrupt our friendship, occurred when it was necessary for us to allot a permit for 100 head of cattle on his range to a qualified applicant on an adjoining range, which was already fully stocked, but there was room for them on the Ockenden range. This action disturbed him greatly, and when I met him on the trail that spring when he was driving his cattle back to the range, I greeted him cordially, and asked him how things were going, and he answered very curtly that he was being given a "helluva deal" by the Forest Service. I asked him what was wrong, and he said he didn't think he had been given a square

deal by the Forest Service when we permitted another man's stock on his range. I tried to explain to him that there was surplus forage on his range to take care of this stock and that no hardship would be worked on him by this action, but he could not see that point of view, It so happened that this was a late year and that the North fork of Kings River which he had to cross with his cattle the following day was very high, and he also had a new range manager who was not familiar with the range and driveway. I asked him which of the two possible routes he was going to take the next day, and which ford he was going to use, and he said he had not been able to make up his mind which would be the safest. I told him that there was no question but that the upper route was a much safer ford than the lower one, and offered to join his crew and lend any assistance that I could in driving the cattle the next day, and swimming them across the river at this upper ford. At this offer his face broke into a broad smile, and he said "Roy, will you do that?" and on my assurance that I would be glad to, he seemed to be a different man entirely from the one I had first accosted only a few minutes earlier. I did help him the next day, and we swam the five or six hundred head of cattle without the loss of a single animal, and he was very happy indeed.

Another incident that is perhaps worth recording to further illustrate the peculiarities of his character, occurred at an Annual meeting of the California Cattleman's Association, held at the Palace Hotel in San Francisco. As the meeting was adjourned for luncheon, Tom gathered about him some eight or ten stockmen and myself as we were coming out through the lobby, and asked us to be his guests for luncheon. He steered us into the dining room of the Palace Hotel, and we filled up a

large table, and when the waiter arrived to take our orders, Tom put on one of his characteristic mean attitudes and began to do and say about everything that he could to arouse the animosity or displeasure of the waiter, and while he urged each of his guests to order anything on the menu that looked good to him, he complained to the waiter about the smallness of the size of the butterpats, and the scarcity of raisins in the bread, and other picayunish, minor details that had absolutely no importance. He seemed to take pleasure in paying the check, which was at least $10 or $12, and generously tipped the waiter after the meal was over.

In talking to Supervisor Benedict one day he told Ben that I was a pretty exacting Ranger, and said that he did not think that I liked him very well, but in the next breath admitted that so far we had always been able to come to a fair settlement of any problem that had ever arisen. In his heart I know that he had a high regard for me, because once when I was in the store for mail and supplies he invited me to have dinner with him and after the meal he discussed at considerable length my job and opportunities in the Forest Service. He suggested to me that I could never expect to get ahead very far, or acquire much wealth if I made the Forest Service my lifetime work. He advised me that the only way for a young man to get ahead in the world was to get as deeply in debt as he possibly could, and that if he had the right stuff in him he would eventually pull out, and acquire more property and more responsibilities, and wound up by offering to finance me in the purchase of at least a small ranch property and a herd of cattle. He said that he knew that I had the basic qualifications for operating such a business successfully and that in ten or fifteen years I could become independent. I

thanked him but told him that I was so interested in Forest Service work that I doubted if I could ever get the same personal satisfaction and enjoyment from any other job or life. I told him that I, at least, had the assurance of a fair living for myself and family, as long as I made good in the Service, and that there were many things, in my opinion, to be considered in a satisfactory life than just the accumulation of money, or what it could buy.

A few years later, when I was assigned the responsibility of working up the range appraisal report for the Sierra Forest, I was able to secure some of the very most reliable data obtained from Tom Ockenden. He had an excellent bookkeeping system, in which each particular line of his industry or activity was kept separate and made to stand on its own. In other words, his Cattle business had to pay the Store account, or the Land investment and Tax charges, or any of the other inter-dependent services which the operation of the cattle business obtained from the other activities. He operated a Sawmill, which also, of course, had to stand on its own just as his store business did. He was a keen appraiser of land and stock values, and was able to give me a lot of valuable information and advice. Just a few weeks ago I was depressed and saddened to read in a newspaper of the death of Tom Ockenden.

EARLY RECREATION PLANNING:

The lack of roads in the Kings River District limited its recreational development and use very materially, but Power development in the Pine Ridge District by the Southern California Edison Company was responsible for a very heavy recreational influx and use at Huntington Lake and Big Creek. Also, in the vicinity of Shaver Lake, where the Shaver Lake Lumber Company had constructed a dam many years earlier. At Shaver Lake practically

all the land was in private ownership but at Huntington Lake and Big Creek the Federal Government was the owner, and it became evident about 1914 that extensive plans for subdivision of fairly large areas for summer home purposes were essential. Also the designation of large areas for for public camping use. I spent several weeks in 1914 on detail in the Pine Ridge District, working with the district and assistant ranger of that district in making surveys of summer home sites, public camp grounds, water lines and roads to serve these areas. In some instances, the experience of later years has proven that summer home sites were laid out in a rather limited or congested plan, and somewhat larger lots and further set-backs from roads would have been desirable. On the whole, however, I believe that the Service and the permitteos of that area are fairly well satisfied with the layout that was made at that time, with practically no precedent to be guided by. The small Sawmill operating in that area gave me an opportunity to get some experience in marking and scaling timber, and a limited amount of timber cruising. On the whole, the Edison Company were a very fine outfit to deal with. Much of the development work the Forest Service undertook in the improvement of recreational facilities was immediately adjacent to their Storage reservoirs and other Power development works, and possibly they figured that this development would contribute in some degree at least, to the development of the community life that would be advantageous to their personnel and contribute to better and more attractive living conditions for them.

WORLD WAR DEMAND ON FOREST RANGERS:

Early after the start of the World War, the demand for meat,

leather and wool created a new impetus to the stockmen of the United States to increase their production. The office of Range Management, in Washington, encouraged all Regions to go as far as they could in their range management policies to cooperate with and meet this demand of the stockmen for greater production. A young fellow named "Gene" Clark, who had been acting as a Grazing Ranger on the Plumas National Forest with some success, was transferred to the Sierra Forest to head up the Range Management program. His background had absolutely none of the Western Stock Range aspects behind it, - he had a keen mind and lots of energy but from the standpoint of practical knowledge of the production of stock under western range conditions, he was totally inexperienced. His big talking point to the stockmen was that by the more intensive and logical location of Salt logs or boxes, that they could secure a much more complete and uniform distribution of their stock, and by this system could expect to increase the carrying capacity of practically all Forest Ranges, all of which had a certain amount of practical value in it. The trouble was, however, that Clark was so enthusiastic in his program that he almost invariably made the mistake of prophesying much greater possibilities than could possibly be realized by this, or any other method of distribution.

Clark's first field trip out to my ranger district revealed to me that he was not too well qualified for the job which he was attempting to do. After spending about two weeks in my district, I was thoroughly satisfied, however, that some value would be gained by a systemmatic and complete salting plan. Soon after Clark's arrival on the Sierra, Supervisor Benedict had sent out a letter to all the Rangers requesting them to give their full cooperation to Clark's Range management activities and the installation of improved management plans on the Forest Ranges.

Clark, in his enthusiasm, was inclined to over-estimate the precedence that was to be given to range management work.

As an example, he and I were in the back country where we were entirely out of communication by telephone with our look-out system, but on our traveling through this country we happened to get out on the summit of a high divide from which I could get a fairly comprehensive view of my entire district, and I was considerably exercised to discover a large smoke rising out of the middle fork of Kings River country. We were enroute to the cattle camp at Crown Valley, which was only a few miles from the location of this fire, and so continued with our pack and camp outfit to Crown Valley, where telephone communication was available. On arrival there I learned that my administrative Guard from Dinkey had stopped in at the cow camp the day before, and taken the permittee, a man by the name of Clyde Johnson, with him and proceeded to the fire to attempt to get it under control. Knowing the fairly heavy cover that prevailed in this area, and the very steep nature of the terrain, I realized that the control of a large fire by two men was practically an impossibility within any reasonable period of time, and so I suggested to Clark that we get some lunch and continue on to the fire to give them help, and find out just how serious the situation was. I was surprised to find Clark take the attitude that we were on a range management trip, - that that was our objective and that nothing, not even a forest fire, should be permitted to interfere with this important work. I told him that my entire training in the Forest Service had always rated a "going fire" as the most urgent responsibility of any Forest officer, regardless of what other work he might be doing at that particular time, and that after all, I was District Ranger in charge of the Kings River District, and that I

considered it my responsibility to get to this fire as soon as possible, and that he could suit himself, or course, about going with me but that if he refused to go I would make a strong recommendation to the Supervisor that he be reprimanded for neglect of the duty of highest priority. He finally agreed to accompany me, and on our arrival at the fire, where we found the other two men, I was glad indeed that he had made this decision, because they had only succeeded in getting a line partway around it, and we spent about four days and nights before we had it safely under control.

Clark's tendency to exaggerate the possibilities of what might be accomplished by his systemmatic salting plan soon earned on the part of all of our stockmen a lack of confidence in his practical judgement or ability as a Range Management expert, and though he continued to work in this activity for a couple of years or more, his efforts were only fairly successful.

RANGE MANAGEMENT ASSIGNMENT:

Early in 1920 Clark decided to resign from the Forest Service and go into private business with a brother-in-law of his, and Supervisor Benedict asked me to take over the duties and responsibilities that Clark had been handling the past few years. One of my first jobs was to complete the organization already started by Clark of organizing a Community Association covering the management of the Jackass Range, on which some 18 permitteos were at that time assigned, with a total of about 1000 head of cattle. The tentative plan was to consolidate about three small units into

one larger one, hire a range manager and assistant, and by assessing each permittee on the basis of the number of stock which he grazed, the expense would thus be born on an equal, per-head basis by all permittees. Billie Brown, a former Forest Ranger, who took the examination with me in 1907, was employed as Range Manager. The permittees owned anywhere from 10 to 200 head of stock and some of the smaller owners in particular proved to be difficult men to handle or imbue with any modern ideas of range managment. During the summer of 1920 I spent more than two months on the range itself with Bill Brown and others of the permittees in the development of this community management plan, which included the fencing of several holding pastures to facilitate the gathering and holding of stock on the range, the fencing of four poison areas to protect stock from tall Larkspur, which had been taking a heavy annual toll of cattle, and the location and installation of a large number of salt logs. Billie Brown was an untiring worker, and never thought of quitting and heading for camp until the evening shadows of the setting sun reminded him that the day was about done. We camped and worked together in all of this activity and it proved to be one of the most interesting field seasons that I have ever spent in the Forest Service. Billie was a man of intense likes and dislikes and while all the permittees gave him credit for being an indefatigable worker and an excellent cowhand, his personality did make him a good deal of trouble and even enemies of some of the other permittees. In all my experience I think I have never known a man with a keener knowledge of cattle. He had the faculty of being able to identify and tell one the history of almost every individual animal on the range, regardless of ownership. Once he saw a cow brute he never forgot its characteristics, and he

knew just about the particular part of the range that that animal would likely return to from year to year, and it's a fact that a calf born on a Forest range will have a strong tendency to return to that particular part of the range in succeeding seasons. By this same token I am convinced that wild game animals have the same tendency in their migration between winter and summer range. The very limited financial qualifications of several of these permittees, and the necessity for very careful expenditure of every penny of their revenue, in order for them to make enough to provide satisfactory or even meager living conditions for them and their families, was perhaps the principal factor which made that a most difficult group to organize and keep functioning in any sort of a cooperative management program, and while much better distribution and cheaper management was obtained for the permittee, it was necessary for the Forest Service to maintain a very close supervision of that group as long as I remained on the Sierra, which was until March, 1926, when I was transferred to the Inyo to succeed Tom Jones as Supervisor of that Forest.

During that period of five or six years, it was necessary on at least two or three occasions to call Jesse Nelson, in charge of Grazing Management in the Regional Office, to the Sierra to sit in on the settlement of contention between some of the Jackass permittees. On one occasion, nearly half the permittees became dissatisfied with the system of Management and prepared a petition signed by them which was addressed to the Regional Forester, in protest of several phases of the community management system. This group visited the Supervisor's office one day during Benedict's absence, and presented the petition to me. I was, of course, riled at their action

and on noting that the petition was addressed to the Regional Forester, asked why they were bringing it to the Supervisor's office, - if they proposed to go over our heads. They admitted that they had intended to go over our heads, if necessary, to have the community plan abolished, and so I told them that I did not know what Benedict's reaction would be, but so far as I was concerned, they had better take it to the San Francisco office, and that I would refer the matter to Benedict on his return to the office within a day or so for whatever decision he decided to make. Benedict decided, as I felt certain he would, that the advantages of community management had already been proven and that he would not consent to its disorganization and return to the old system unless the Regional Office so ruled. They proceeded to go to San Francisco, where they presented their petition to Mr. Nelson, who told them that he felt the Community plan was working out to the mutual advantage of the permittees and the Forest Service; that the range was being handled in much better shape, and that there were many advantages in continuing the plan but that he would be willing to meet with both opponents and supporters during the coming field season and go over all phases of the development that had taken place there to date with the permittees and a local representative of the Sierra Forest getting in on the investigation. This promise was kept the following July and I accompanied Mr. Nelson on this field trip. After spending about six days in riding the range in great detail, viewing all the improvements that had been made, the distribution that was being obtained, and hearing the arguments of both sides (there were about six permittees accompanying us) Nelson remarked at the supper table one evening that he believed he had a full and complete picture of

of the whole set-up and was willing to arrive at a decision and suggested that that be done around the campfire that evening. At the campfire he went into considerable detail to outline the advantages as he saw them that had been accomplished, but told them that since all the permittees were not represented there, and there still seemed to be some dissension, he would be willing to make a final statement to all permittees at the Supervisor's headquarters at the end of this field trip, which we had planned to continue on through the Pine Ridge and Kings River Districts, and be ended at Northfork about two weeks hence, and so a definite date for such a meeting was set.

Nelson and I continued this grazing inspection trip, which proved to be a very pleasant and instructive one for me because he, with his broader experience in range management in other regions in the Unit States, was of course able to give me some very valuable information and pointers in that as well as other phases of Forest administration. The meeting took place at Northfork as per schedule and occupied practically the entire day and might have continued on through the night had Mr. Nelson been willing to stay with them that long. A few minutes before it was time for the stage to leave, however, Jesse began to squirm in his chair and his eyes sparkled with the fire that they could muster when the occasion warranted, and he finally rose and said, in effect, "Gentlemen, I have spent a week with you on the range, and an entire day here listening to arguments that in the main are small and picayunish. You have failed to convince me that the Community Plan is not the most practical and efficient way of handling range management problems on the Jackass range. I have attempted to, and believe I have, given full consideration to every phas of your arguments that have been introduced, and as the result of this,

my decision is that the community system will continue in effect. You opponents do not have to continue to take your stock into the Forest unless you so desire, but in the end the Forest Service, representing the Federal Government, is the owner and must have the last say of management practices on Forest Ranges, and it is up to you to determine whether or not you will continue to enjoy the privilege of grazing on this range."

SHEEP GRAZING:

One of the most controversial questions in the early history and development of the withdrawal of National Forests in the West was in relation to the control of Sheep grazing. Many stories have been written regarding this, and even famous fiction writers still find this a fertile subject. The early history of the establishment of sheep grazing in the High Sierra Country dates back to the '60's and many of the place names, including Peaks, Canyons, and Meadows, in the Sierra Country originated from the pioneer sheep men. The damage to watersheds and reproduction, resulting from sheep grazing has, in my opinion, been very largely exaggerated and perhaps part of this sentiment, at least, has been promoted by cattlemen who were in competition with the sheepmen for range. Men like John Muir, and other naturalists, who were then, or later became famous were also responsible for much of this antagonism toward the sheep men. It was natural, I think, that a man like John Muir, who was so enthusiastic about the natural attractiveness and beauty of the mountains and the fauna and flora, should in many instances let his enthusiasm and love warp his practical point of view, and although it is said that John Muir actually spent one or two seasons in the mountains herding sheep, it is quite unlikely that he was really a practical sheep herder or had much of the sheepmen's

point of view. In other words, his job was merely a means to an end, which provided him the opportunity of earning a few dollars and at the same time enjoying the outdoors and the beauties of the High Sierra country. It was natural, perhaps, that sheep men and their descendants who had pioneered the opening up, or entrance into the High Sierra country with their sheep, over a period of many years, should resist the efforts of the Forest Service to exercise any sort of control over the use of this range, which they had more or less come to regard as a personal right.

One of the most interesting permittees to talk to, in my district, was D. C. Sample of Fresno, who told me a good many stories of his early experiences in the Kings River Country, and at one time Mr. Sample was one of the largest land owners in Fresno County, and was one of the pioneer sheep men who claimed to have taken sheep into the mountains in the early '70's. He had come to California as a boy, from Tennessee, and by his thrift and energy had amassed a substantial fortune by the time I became acquainted with him. He had raised a large family of boys and girls and at that time his sons were grazing about a thousand head of cattle in my district. He had never lost the Southern drawl and mannerisms which, to me, added to the charm and interest of the stories that he related to me. Soon after the establishment of the Sierra National Forest, much of the high country was closed to sheep grazing, but after the declaration of the World War it was opened as an emergency measure to help contribute to an increased production of livestock products. The upper basin of the Middle Fork of Kings River drainage was more accessible from the "East Side", or Inyo County, than from the San Joaquin Valley points, and in its early occupancy by sheep men, most of the use had come from the "East Side".

The Steward brothers of Big Pine, in Inyo County, were descendants of one of these old pioneer sheepmen who had fallen heir to and were carrying on the business originated by their father. They made application to the Sierra Forest for permission to take their sheep into the upper basins of the King River and permission was granted with certain restrictions which were set up to reserve several of the most desirable Meadows for protection of horse feed for recreational pack trip parties.

During the summer of 1919 a prominent Eastern man happened to get into this upper country, which was visited by a comparatively few people, and found that at Little Pete and Grouse Meadows, both of which were reserved areas, the sheepmen had violated these reservations, and camped their sheep in or near the meadows until every bit of forage growth had been grazed.

It is my understanding that on returning to the East this man registered a complaint directly with the Chief, in Washington, and Will C. Barnes, who was Chief of Grazing at that time, was instructed to immediately make a personal investigation of the complaint which had been registered. He picked up Chris Ratchford, who was Chief of Grazing in the San Francisco office, and the two of them arrived at my headquarters at Dinkey about the 10th of September, 1919. We outfitted with stock from there, and I accompanied them on a pack trip which took us up through the North and Middle forks of Kings River over Muir Pass, into the South fork of the San Joaquin, and out to Shaver, about a two weeks circle, and one of the most enjoyable and instructive back country trips that it has been my good fortune to take.

The many and varied experiences of Will C. Barnes in the West and Southwest had given him one of the richest backgrounds that, perhaps, any Forest Service man at that time had been privileged to acquire. His

character and personality was so versatile that he could also mingle with the high society of Washington, D. C., and I am told that he counted as personal acquaintances many of the foreign ambassadors and people of note in the official circle at Washington.

Chris Ratchford had also had a broad training and background in the practical phases of the stock and ranch industry in California, and after we had been out several days, I recall that Mr. Barnes, in rather a confidential discussion with me revealed that his impression of Chris on this trip was so favorable that he was beginning to form designs on him and predicted that within a short time he would find a place for Chris in the Washington organization.

On such chance happenings the destinies of men are sometimes built, and it so happened that within a few years Chris Ratchford succee Mr. Barnes to the office of Chief of Grazing in Washington, and is today Assistant to the Chief Forester, and has had official trips to Europe as well as practically all of the National Forest areas in the continental United States. Numerous incidents of this trip are recalled to my mind, including this one at Grouse Meadow.

We arrived there in late afternoon with a strong, chill, north wind blowing but the skies were cloudless. The slowly flowing stream wound down through the meadow fringed with Lodge Pole pine, and surrounded by peaks towering two or three thousand feet above us. Mr. Barnes was so intrigued with the beauty and rugged grandeur that he insisted that our night camp site be out on the edge of the meadow where he could have a full opportunity to enjoy this superb view. Chris and I tried to persuade hi that the Camp should be pitched in the shelter of the fringe of timber and

preferably with one of the nearby large granite boulders on the north side of our camp for protection from this cutting north wind. Mr. Barnes accused us of having no appreciation for the beauties of nature, and said that we acted like a couple of mercenary sheep men. Our arguments were to no avail and camp was pitched on the site selected by Mr. Barnes. We managed to get out supper with a fair degree of success but the velocity of the wind continued to increase and by bedtime was howling loudly in the treetops nearby. Chris and I carried our beds back to where we could have some protection but on arising in the morning, we found that the wind had scattered much of our camp equipment to a considerable extent, and when we finally succeeded in getting Mr. Barnes out to eat breakfast, he asked us to be witness to the promise to himself that he never again would argue a question of that nature with the Ranger.

After negotiating Muir Pass at an elevation of more than 12,000 feet, we descended into the South fork of the San Joaquin drainage. The sheep men had already removed their herds from these high altitudes and we found a lone sheep on the trail. We decided that this animal could only fall prey to some lucky coyote and so we killed and butchered it for camp meat. The wool brand disclosed its ownership and Mr. Barnes insisted that as his contribution to the expense of the trip, he send the owner a check, which he did. The permittee, on receiving the check, was so impressed that he told me many years later that he still had this check, which he had framed and never cashed. It was customary, under these circumstances, for a person to kill a sheep and use it, on the assumption that the owner would never receive any benefit of it.

As the result of this inspection trip, Mr. Barnes found the complaints to be fully justified and a decision was handed down from the

Chief's office forbidding the continuance of sheep grazing in that High Sierra Country, and so the failure of these permittees to observe the special restrictions which had been written into their permits resulted in the cancellation of privileges to themselves and several other sheepmen which have never been renewed to this day.

BRIDGE CONSTRUCTION

Early in May of 1916, which happened to be a very heavy season for precipitation and snow in California, I received a report from a group of mining people who had attempted to pack back into the Middle Fork of Kings River to the effect that they had gone back as far as the North fork of Kings River, near Cliff Camp, and found that the weight of the snow had crushed the bridge down and the river was so high that it was impossible to ford or swim their stock with any degree of safety.

They had returned with the idea of investigating the possibilities of cooperating with the Forest Service in the replacement of the bridge, which would permit them to get on back to their destination in the Middle fork of Kings River at Crown Creek.

I telephoned the Supervisor's headquarters and Mr. Reddington wired San Francisco for authority to proceed with the reconstruction of the bridge and a financial authorization to cover its cost, which was given favorable approval in San Francisco.

It was decided to replace the timber bridge which had gone out, with a cable suspension bridge, and on inquiry we found that the Southern California Edison Company had the necessary cable and hardware supplies that we would need in stock at Big Creek. Arrangements were made to purchase

this, and I proceeded to Big Creek in my new Ford, the first one I had ever owned, and we loaded the cable and other hardware in the back end of the Ford and drove as far as we could, on the road in toward Dinkey Ranger Station. Deep snow blocked the road about 8 miles west of Dinkey where we were met by the packer with the mining group and from which point we had to pack the cable, and all of our provisions and camp equipment over snow ranging in depth from two to eight feet for a distance of approximately 25 miles. We finally arrived at the bridge site about the 12th of May and proceeded to reconstruct the bridge. One of our first jobs was to get across the river so that we could string a tomporary cable across and have some means of crossing back and forth for work on both sides of the river. The site was a natural one with a span of only a little more than 70 feet wide sheer granite walls on each side of the stream, and the bridge plan called for a timber A-frame, at each end of the span, the main cables to be anchored with I-bolts set in the solid granite, and the cables to be strung over the top of the A-frame with supports for the stringers to be suspended by short cables fastened to the main cables over the A-frame. It was the first experience that I had ever had in the construction of a bridge of that type, nor had anyone else in the party of about six had any experience. We lashed a couple of dry cedar logs together and after trying for several hours, finally managed to get across the river, which was so swift that it was difficult, indeed, to maintain any control over this improvised raft. The packer and I were chosen for the raft crew, and the rest of the gang stayed ashore with a rope attached to the raft so that in case we were unable to pilot it across the big pool which we were trying to negotiate, and which was a swirling

mass of white foam-crested currents, they could pull us ashore, as there was grave danger of being swept down over the Falls at the lower end of this pool. We finally managed to get across, however, and then first a rope was thrown across to us, which was attached to a piece of 5/8 inch cable which we dragged across and fastened to a tree on our side of the stream.

The cable was threaded through a chiv wheel and fastened to a tree on the other side of the stream. A bos'n chair was improvised and hung to the chiv and our temporary transportation system was thus completed. The packer, however, was so unnerved by the experience in negotiating the river in the raft that he decided he would spend the rest of his life on the other side of the river, rather than to trust it to this bos'n chair. The pangs of hunger, however, as supper time neared, chang his mind, and he finally screwed up his courage and came across to the side on which camp had been pitched.

Our equipment for the construction of this bridge was very inadequate to say the least, and the job of drilling four holes into this hard granite to a depth of about two feet, was a difficult one indeed with the three or four drills that we had, which happened to be single jack steel. The I-bolts were 1-1/2 inch in diameter and the drill steel only 3/4 inch, which necessitated the swedging of the bits to at least 1-1/2 inch in diameter The cow camp at Cliff Camp was only about a mile from the river, and there we found a small hand forge, and a hammer, which we carried down to our camp. We used some thick, dry pine bark, which we found for coal, and a sledge hammer for an anvil, and finally succeeded in getting these holes down to a sufficient depth after about two or three days sharpening this

light steel, and drilling in the granite. Other members of the crew had been working hewing out stringers and split flooring from nearby cedar trees. The bottom ends of the I-bolts had been split to a depth of about 4 inches, where they had been made up at Big Creek, and a wedge was started in each one of these slits before the I-bolts were injected into the holes in the Granite rock. As they were driven into the bottom of the hole the wedge, of course, expanded the bottom of the I-bolts and powdered sulphur was melted in a frying pan over the fire and poured into the holes, thus filling up the space between the I-bolt and the edge of the hole. As the sulphus cooled, it made a hard substance which froze to the bolts, and the sides of the holes, so that a very satisfactory job was finally completed.

One night, as we sat around the campfire, just at dusk, I looked across the river and saw a black object moving down across the snowbanks toward the river. At first I thought it was a cow or yearling which was venturing up from the winter range ahead of the opening of the grazing season, but as it wandered closer we discovered it to be a large bear which had probably just emerged from its place of winter hibernation. There was a small fox terrier dog in camp, and its owner decided to find out whether or not he had a bear dog, and so he fired a shot with a rifle he had, at the bear, which disappeared in the trees, and three or four of us crossed on the Bos'n chair as rapidly as we could, taking the dog over with us. The dog was taken to the place where the bear had been shot at, and urged to take its track, and we hoped to tree it. The dog absolutely refused to be interested, and so we followed along up over the rocks and through the scattering stand of timber until directly we heard the groans of the bear, which had been mortally wounded. A bullet was fired into its

skull which finished him, and we returned to camp. The fellow who had shot him spent practically all the next day in trying out the several cans of bear grease which he obtained from the carcass.

The bridge was finally finished and given a test by crossing about six or eight head of horses and mules on it at one time, and found to be able to support them satisfactorily, and on my return to Northfork and recounting my experiences to Supervisor Benedict, and Roy Headley of the Washington office, who happened to be on the Sierra on an inspection trip at that time, Mr. Headley decided that he would like to go in and inspect this bridge, which had been finished under such difficult conditions, and so I returned with him.

It was then about the 20th of May, and the night that we spent at Cliff Camp near the newly constructed bridge we encountered a spring snowstorm. Mr. Headley had never been in the Middle fork of Kings River country, and since we were contemplating the construction of another suspension bridge of this same type to be built across the Middle fork later in the summer, we decided to go on as far as Simpson Meadow, two additional days travel. Proceeding the next day, it snowed on us thoroughout the entire day and since there was already a depth of anywhere from two to eight feet of hard packed snow, we had the unusual experience of traveling on a sort of second story elevation. Many of the trail blazes were below the snow level, and we were guided a good part of the day by the telephone line to keep us on the right route. After leaving Crown Valley, however, we had nothing to guide us except my thorough knowledge of the country, and we were sadly handicapped by the very limited vision, or horizon, which we could get in this snowstorm.

We finally arrived at our camp site in the Middle fork of Kings River at the mouth of Crown Creek, late that evening. We had dropped during the afternoon from an elevation of 8500 feet to approximately 4000 feet on the Middle fork and while Mr. Headley realized, of course, that we had come down a lot, he had no opportunity during the entire day to get any idea of what the general nature of the country was, and he told me when he arose the next morning that it was one of the most peculiar experiences that he had had during his entire life, to wake up with the sun shining, the clear skies overhead, and the Canyon walls of the Middle fork towering some 4000 to 6000 feet above him, almost perpendicular, especially on the East side. There was only about 2 inches of snow on the floor of the Valley. The next day we proceeded up the Middle fork to Simpson Meadow, a distance of about 15 miles, and I was surprised to find that even with a little fresh snow on the ground we were able to get through over this rough and primitive trail. We selected and took some measurements of the proposed bridge site, and returned to Tehipite the following day and found two rattlesnakes en-route, despite the earliness of the season, and the fact that a snowstorm had just occurred.

The Middle fork of Kings River was the scene of many interesting experiences to me, while I was District Ranger in charge of that country, but of course my assignment to Range Management work on the Sierra and later transfer to the Inyo removed any opportunity for me to return to this, one of my favorite stamping grounds until September, 1939, when it was my good fortune to have the opportunity to join Supervisors Benedict and Elliott, of the Sierra and Sequoia Forests, Howard Hopkins of the San Francisco

offices, and Brigadier General Arnold, Chief of the Army Air Service and two of his staff members, on a fishing trip.

This trip was exactly twenty years after my last visit in September, 1919, with Will C. Barnes and Chris Ratchford, and I was rather surprised to find that in this period practically no change had occurred in the volume of Use, or the appearance of the Simpson Meadow area in the Middle fork of Kings River. It is one of those rare sections which, because of its very rugged terrain, and primitive trails, has retained all its natural characteristics.

We spent a day trout fishing on Goddard Creek, a tributary of the Middle fork at Simpson Meadow, and I took 25 beautiful Rainbow trout with the least effort, and perhaps the greatest enjoyment of any fishing trip that I have had in recent years.

There was no evidence along the banks of this stream that anyone else had fished there during that season.

General Arnold, and his members, were so pleased with the rugged grandeur and beauty of this Canyon, as well as the fishing opportunity, that they declared that they were certainly going to return for another trip through there in the near future, and it is my earnest hope that I will be privileged to accompany them.

Having digressed a mere 23 years from the trend of this story with Roy Headley, I had better get back to the job of returning him safely to Northfork, which was done, and I have no doubt that Roy Headley, after all these years of exciting and varied experiences in the Forest Service, regards this trip to the Middle fork taken with me in 1916, as a very interesting one, indeed.

THE ROLE OF THE WOMEN:

I think that the early history of the Forest Service would be incomplete without mentioning the important part that the women of the Service personally played in that picture, and in my opinion, Julia T. Shinn, wife of my first Supervisor, stands out head and shoulders above them all.

Mrs. Shinn was Clerk for Mr. Shinn in the days when the office first consisted of only one or two clerks, and later as the volume of clerical business increased, she served as Chief Clerk until Mr. Shinn's health, a short time before his death, made it necessary for her to give up her office position in order to devote her time and attention to Mr. Shinn.

She had a lovable personality that endeared her in the hearts of everyone who had the good fortune to know her. She was most tactful in dealing with the general public, and had fully as keen an insight in the field work and its problems on the Sierra as any other Chief Clerk that it has been my privilege to know. She always had a sympathetic ear for the problems of the entire personnel, and more often than not was able to figure out a way of lending suitable assistance. In fact, her understanding of the field problems was often more practical than Mr. Shinn's, and since she was always in the office it came to be an established procedure among the Ranger personnel to ask for Mrs. Shinn rather than Mr. Shinn when they phoned into the office for advice and information.

Soon after Mr. Redington's assignment to the Sierra as Mr. Shinn's successor, he realized this situation and sent out a circular letter requesting the field men to take their problems up with him rather

than Mrs. Shinn, but admitted that in many instances it might be necessary for him to get the information requested from Mrs. Shinn. He stated that he could not hope to get the full conception of the responsibilities of his job, and the problems of the field unless they were brought to his personal attention.

Forest officer's wives, in the early history of the Service, had to be satisfied to live and keep house under rather primitive conditions. With the first building limitation set at $400 for residences it was, of course, impossible to provide anything elaborate or with modern conveniences. Congressional appropriations in those days were so limited that funds for even that type of residences were difficult to secure, and when an allotment was set up for the construction of a residence, it was necessary for the Ranger and his superior officers to exercise all their ingenuity in supplementing the things that absolutely had to be bought with everything available that could be contributed to the building. Thus, it was ruled to be permissable for Ranger labor to be used in the construction of a house, without charging it against the actual building limitation, and in recently reading some of my early diaries, I have been impressed with the large number of Ranger Station dwellings and other buildings that I have contributed something to the construction of. Carpenter work, building fireplaces, plumbing, paperhanging, and painting were all included in this category of contributed time. Mr. Benedict and other rangers contributed just as much as I did.

When I was married in 1909, my newly established Ranger District had no official quarters, and the only house that we could find available was a very shacky-looking board and batten house that had been unoccupied

for several years. I rented this, however, from its owner, and my Assistant Ranger and I put in some time in repapering and "dolling" it up. My wife never objected to any of the hardships or primitive conditions that she had to put up with, and got a great deal of pleasure from the many pack trips on which she accompanied me in the field.

Louise Jordan is another of the early Service women who had ideal qualifications for a Ranger's wife. Chester Jordan, her husband, was a large man, standing about 6 feet 2 inches, and weighing 220 pounds or so. He had an appetite in proportion to his stature, and Mrs. Jordan was no exception to the rule in that she was an excellent cook and soon learned the art of camp cooking. She also accompanied her husband on pack trips into the field or field project assignments where it was necessary for them to live outdoors or in tents.

One of Chester's early assignments was to build a bridge across the South fork of the San Joaquin River, and since all materials had to be split or hewn out at the bridge site, it required a couple of weeks or so to do this job. At that particular time the Jordan's headquarters were at Shaver, and they had a milk cow and being unable to find anyone to take care of the cow during their absence in the back country, they just took the cow along with the pack train and thus had their milk supply for the bridge job.

Both Chester and Mrs. Jordan were most hospitable people, and frequently entertained other Forest Service personnel, who were within a reasonable travel distance. Since all travel was accomplished by saddle horse or buggies in those early days, there was little opportunity for

inter-forest contact, but all of the Supervisors on the Sierra did encourage men within the Forest to visit each other officially and socially, as often as the opportunity could be arranged. The women-folk were always invited and welcome to attend Ranger Conventions, and contributed much to their success. Old-Time Community singing, Card Parties or other social activities were the usual order of the evenings, and were looked forward to by all of us with nearly as much interest as the opportunity to exchange official ideas and experiences.

Another outstanding woman in the early Administration of the Sierra National Forest was Emma McCloud, wife of Mal. Perhaps no Forest officer ever had a greater aversion to office work than Mal, and for many years practically all the 25 or 30 years of his service on the Sierra Forest, she handled most of his typing and official correspondence.

Unfortunately, Mal had a weakness for liquor, and had it not been for the close vigil that she constantly maintained, I feel certain that Mal's career in the Forest Service would have been short-lived.

Dona Price, the sister of Audie Woffard, the oldest Ranger on the Sierra Forest, with a record of about 34 years service, was married to Frank Price in the Fall of 1910, and Frank was assigned to me as an Assistant Ranger. He is now Supervisor of the Mendocino Forest, but for several years we worked together on the same, or adjoining Ranger Districts. Both Frank and his wife were musically inclined, with the result that we organized a little stringed orchestra consisting of two violins, mandolin and guitar, for our own entertainment and amusement. After we had been playing together for awhile, we came into demand to play for the little country dances that were given in our part of the Forest and for two or three years we got a lot of enjoyment out of doing this.

In those days before the advent of Administrative Guards or Dispatchers, the Ranger women had to answer the telephone and conduct a good deal of Forest Service business in the absence of the men-folks from their official quarters, and many of them were so well acquainted with the field job that they were capable of doing a creditable job of organizing a fire crew and seeing to the supply of subsistence and follow-up until the district ranger or other qualified officer was able to take over. I can recall a few instances where this was not done with sufficient tact and conflict resulted. In most instances, however, the women were able to do this without giving fire guards or other field personnel the impression that they were attempting to give them orders. They tactfully made it clear that they were only attempting to give their temporary cooperation and assistance in the absence of the qualified or responsible Forest officer.

I know of several instances where the wives of Forest officers, or of Cattle Permittees, assumed the responsibility of taking over the Cook's job in a Fire camp, and doing a creditable job of serving meals to fire-fighters at all hours of the day and night as the men were able to get into camp for a square meal.

On the other hand, I can recall instances in which the lack of the wife's cooperation and willingness to put up with the going primitive condition so handicapped their husbands that their careers in the Forest Service were shortlived.

I will cite one instance of a field trip on which I was accompanied by my wife as an illustration of many others. In 1918, in our endeavor to get complete use of all the available forage in the back country, grazing

permits were issued to sheepmen to graze range in the High Sierras that had been closed for many years previous. Permits were issued to two or three new permittees who were not familiar with the ranges, and it became my responsibility to meet them on arrival at their ranges with their herds of sheep, and go over the ranges for the purpose of informing them of boundaries and assisting them to get acquainted with the terrain. The roughest country in all the Sierras is in the upper basins of the Middle fork of Kings River, and since my wife had never seen any of that grand scenery, I decided to take her along. We had two youngsters at that time, ages four and six, and my youngest sister also accompanied us.

I have in my collection of Kodak pictures several views taken on this trip which helped to bring back some of the very pleasant experience: Two Basque permittees arrived at Simpson Meadow about the same time th I did with my party, and so I pitched a base camp at that point at an elevation of about 6000 feet, and left my family at the base camp while I scouted the range with the camp-tender. We had to be away from the base camp a couple of nights, and on my return to our camp I was struck with the unusually cordial reception from my family. Their imagination had led them to anticipate visits from Bear and other wild animals in this wild country, and my wife told of being awakened in the middle of the night and seeing my sister with her flashlight trying to locate the cause of a noise from some distance from the camp. When they finally discovered what was causing the noise, it proved to be just the extra horses that I had left who had strayed into camp to make sure that everything was being properly conducted there during my absence.

We went on as far as Grouse Meadow in the Middle fork, and

pitched camp in a Lodge Pole forest near the edge of the Meadow. A dead tree, which had lodged in other green trees at an angle of 45 degrees pr so, produced a weird squeaking sound as the wind swayed the green trees supporting it. This attracted the interest of my youngsters and they made considerable comment about it. Many years later, when I visited this same camp site from the Inyo, I noted that that peculiar squeaking sound was still emanating from this tree, which had never gotten any further toward the ground, and I was reminded of my pleasant experience of some 16 or 18 years previous, and the beautiful Golden Trout, 10 to 14 inches long, that we had caught on that earlier occupancy.

Golden trout are still fairly plentiful in this stream, but the average size is now much smaller because of the very much heavier use and fishing that has resulted from the improvement of the trail system from the East side of the Sierra.

In the mountains and National Forest areas there are also outstanding women-folk among the Users and Permittees, and the Sierra was no exception to this rule. In the Kings River country Jessie Sample, the young wife of Bud Sample, was just as much at home with her husband in the cow camps or on the trail, moving stock from the winter range to the summer range, as was her husband. Reared on a ranch she was an expert horsewoman and could rope a calf with as much skill as the average ranch hand, or pack a mule just as readily, and for many years she accompanied her husband to the Forest Range where he summered his cattle, and spent the entire summer season with him.

Another instance is that of the three Perry sisters, all of whom had a few head of cattle in their own name, and handled them themselves

without assistance from anyone except occasionally a young brother, who helped them to and from the mountains. His services were required, however, on the home ranch sowing and harvesting crops and other work that was harder or more difficult for women to accomplish than taking care of the cattle on the mountain ranges, and so each spring the girls drove the cattle into the back country and took care of them during the summer season, salting and distributing them on the range as efficiently as many of our men permittees would have done.

FIRE SUPPRESSION DETAILS:

In the early history of the Forest Service, the Fire Suppression Organization had not been developed to anywhere near the extent of the present day set-up, and when large fires got out of control and beyond the ability of the local Forest personnel to handle, it was customary to detail experienced personnel for overhead from other forests in the regions from which they could be spared, to go and lend their assistance until this going fire had been placed under control.

My first detail to a large fire of that nature occurred in 1923 when a going fire on the then Santa Barbare Forest was badly out of control, and a telegram was dispatched from the San Francisco office requesting the Sierra to send two experienced men to help out on the Santa Barbara.

Supervisor Benedict was in the back country at that particular time and out of touch with the telephone system but, according to his field schedule, was due to return either on that or the following day after I received the wire. Benedict had left me in charge as Acting Supervis during his absence from headquarters, and on canvassing the situation I

found that there were several going fires on the Sierra, none of them serious, however, I decided that rather than send any of the District Rangers I would go myself, and take Burnett Sanford, who was the Timber Sale or Forest Management man for the Sierra, at that time. Sandy had had a good deal of experience in fighting fires, and on contacting him by phone I found that he was willing to accompany me to Santa Barbara.

Arrangements were soon perfected and he and I left by auto that afternoon and arrived in Santa Barbara about 3 AM the next morning. We went to bed and snatched a few hours of rest and sleep, reporting at the Supervisor's office about 8 o'clock in the morning, where we found Chester Jordan, then Supervisor of the Santa Barbara, and Ed Kotok, who was in charge of Fire Control for the San Francisco office at that time, were in Jordan's office making plans for sending out men and supplies to control this fire, which had already been burning for a couple of days. By 11:00 A.M. a crew of 30 men or so had been recruited from the streets and pool halls of Santa Barbara, tools and supplies collected, and we were on our way to the scene of the fire.

We were able to drive as far as Santa Inez Ranger Station, where we found pack stock, waiting to pack the supplies over the steep and rough trails to the base camp located in the Santa Cruz Canyon. Most of our fire fighters were Mexicans and it required practically all of the night to hike in, over the rough trail to the camp. In fact, the crew threatened several times to turn back or camp on the trail site until daylight, in order to be able to travel more easily. By a certain amount of kidding and threatening, we managed to keep them moving slowly and with occasional rest periods until we arrived at the Camp at about daybreak.

The fire was in charge of District Ranger Frank Dunne, and because of the very rough and inaccessible nature of the country in which it was burning, we spent about 19 days fighting this fire. During that period we occupied seven different camps and had several interesting experiences. Because of the changing wind conditions, the fire spread more or less by intensive spurts, and would then quiet down for perhaps a day or so, permitting us to control by the Cold Trail method extensive sections, but always before we were able to completely surround the fire with our limited crew of men, the wind would come up and carry it off in a new direction, spreading sometimes as far as five or six miles within a few hours.

I recall one of our camps at Mission Pine Spring where we were optimistically of the opinion that we would have the fire fully under control by daylight the next morning.

Supervisor Jordan and Kotok had come out to see how the control work was coming and they were of the opinion that that night would wind up the fighting. A high wind came up, however, about midnight, carrying the fire completely out of our control and spreading it down the steep mountainside and canyons, toward the original base camp at Santa Cruz Canyon for a distance of more than six miles, requiring a new plan of attack to be formulated and camp to be moved by a circuitous route for several miles to get around on the other side of it, where we could begin the job of control again. Our next camp was pitched in what was called Peach Tree Canyon and within a couple of days when we were beginning to have new hopes of completing our job, another high wind wrecked our plans again. I happened to be the first man in camp to awake at about midnigh

and was alarmed at the bright red glow that I noticed in the sky. Sandy and I had been assigned a quilt apiece for our fire camp bed, and when we had gone to bed the evening before, the wind was blowing so strongly that we had placed large rocks on the corners of the quilts to prevent the wind from blowing them away, and this severe wind had fanned up some burning embers from some place on the mountain above us, and the fire was off again in a mad race down the mountainside. Our camp had been pitched in burned area within a few hundred feet of the edge of the unburned mountainside, which was covered with a heavy stand of brush and live oak. We quickly aroused the men and moved our camp back a little further from the edge of the brush where the fire was rapidly advancing.

It seemed only five or 10 minutes until the flames, roaring 20 to 50 feet in the air, had passed us by, leaving nothing but the glowing embers of the burning roots and stubs of this brush field, and again we were faced with the job of moving camp to a different point of attack.

Enroute to our next camp site we met a Mexican stock rancher who was hurriedly gathering his few head of cattle from the brush lands and getting them into his open fields where they might be safe from the advance of the fire should it come down as far as his ranch.

We pitched camp that night near a small stream where there was sufficient water for our camp needs, and awakening at about 4 AM I was surprised to see a glow to the west of our camp and the fire which we had been fighting all these weeks was east of us. I reported this to Supervisor Jordan as I came to breakfast, (he was again in camp with us), and he accused me of being fire drunk, and seeing fire regardless of whether there

was any fire in the country or not, and would not be convinced that I had seen a fire in the West when the fire that we had just been working on was to the East of us. After breaking camp and ascending the Ridge an hour or so later, we came in sight of it to the West of our camp site, and Jordan was surprised to find that I had been right, and there was a new and different fire burning out there.

We found a place where there was sufficient water for camp purposes, and pitched our camp again and after working that day and night, finally succeeded in controlling this fire about noon the next day. After feeding the men, we continued on our way to the camp site in the Manzana Canyon, our destination, when we had been side-tracked by this new fire.

After spending two or three days in the camp in the Manzana, we received a message from the office at Santa Barbara that Sandy and I were to come out with the pack train and return to the Sierra. The fire was then practically under control except for a certain amount of mopping up and patrolling, which had to be continued for several days after we left.

We were met at the end of the trail by Assistant Supervisor Mendenhall, who took us into the town of Santa Barbara where we arrived on a Sunday afternoon, sorry-looking sights, indeed, after our three weeks experience on the fire line in a country so brushy that one oftentimes had to crawl on his hands and knees to get through at all.

On leaving Santa Barbara, we had purchased new suits of blue denim overalls and jumpers, and these were the only clothes that we had had out on the fire line. They were worn and torn now, until we were rather doubtful that the hotel would permit us to enter in such a disreputable looking condition. We were unshaven, and with the barber shops all clos

we spent a painful half hour or so getting our whiskers off with safety razors, after three weeks growth, but finally succeeded in doing so and getting into our regular service clothes, which had been left at the Hotel and we felt, and certainly looked, more like human beings again after this strenuous but most interesting experience. Fortunately, there were no serious casualties on this fire, despite the very heavy brush cover, and the steep slopes and frequent rapid spread of the fire.

One of our fire fighters, a huge-framed, rawboned fellow about 25 years old, caused us a good deal of grief. He made his boasts on arriving at the fire camp that he had come out to put on about 25 pounds of weight at the expense of Uncle Sam, and immediately proceeded to eat gluttonously whenever opportunity afforded itself. He seemed absolutely impervious to kidding or criticism, and during his several days on the fire line, no one was able to disturb his serenity and even temperament.

He was probably the most able physical specimen in the camp but did the least amount of work of anyone. On the morning that we began our attack on the new fire to the West of our main fire, Jordan told me to take personal charge of this man, and if I did not do a tap of work myself, or direct anyone else, that I was to see that this fellow earned his 35¢ per hour. I did my very best to follow Jordan's instructions, but finally had to admit defeat. I tried every system that I could think of, including shaming and cursing, until I was ashamed of myself, but could arouse no spark of response. He did only a very nominal amount of work, as little as he thought he could possibly get by with. When lunches were served out on the fire line, he seemed to swallow his lunch almost without chewing it, and then proceeded to try to beg something from each of the other fellows. Jordan left us at

the end of the control of this small fire, and had decided that it was hopeless to try to get any work out of this man, who was so shiftless, and told one of the packers who was going in for fresh supplies to take the fellow in and discharge him.

On Jordan's return to his headquarters in Santa Barbara, he decided that the man had not earned any wages, and that the amount of food he had eaten out there had more than paid him for the very limited amount of work that he had contributed, and so told the fellow when he came to the office for his time. Jordan ordered him out when he began to show signs of resentment at this decision, and a couple of hours later the fellow returned with a shyster attorney to threaten Jordan. Jordan himself was a man nearly as large as was this fire-fighting tramp, and was so incensed at his threats that he grabbed him by the nap of the neck and the seat of the pants, and shoved him out the door and downstairs so roughly that he never returned again, and in all my experience with men on the fire line, I think that this is the only instance that I recall where a man was employed who was so worthless and depraved that no spark of interest or enthusiasm could be ignited. The excitement and awe-inspiring sight of a fire spreading rapidly through the brush or timber country seems to have the effect of exciting men to do superhuman things, and to have a desire to continue to work for long periods without rest or food, and with even insufficient water. They hate to give up and acknowledge defeat. This effect is noted even in men who have no particular personal interest in the control of Forest fires, or preventing the damage that they are doing, such as the most transient type of laborers' interest might be classified.

On our return to the Sierra Forest, Supervisor Benedict proceeded to give me the most severe official reprimand that I think he ever gave me in all my experience working under his supervision. He pointed out that he had left me in charge of the Forest during his field trip, and that regardless of the request for assistance from the Regional Office, I should have stayed on the job to complete my responsibility until his return or my telephoned release given by him.

I never could take this reprimand too seriously to heart, however, because I felt that he had given it to me for the specific purpose of seriously calling my attention to the fact than when I was given an assignment that I should not consider it completed until it had been entirely fulfilled, and I knew that he realized that both Sandy and I had gained a lot of valuable experience in this detail to the Santa Barbara, regardless of whether or not our contribution had been of value to the Santa Barbara.

Later in 1927, after my assignment to the Inyo, as Supervisor of that Forest, I had another detail to a southern California Fire Control job, - that of the Mill Creek fire on the San Bernardino Forest.

This detail lasted about ten days, and while it was not as strenuous as the one at Santa Barbara, it also contributed to my education in fire suppression and provided me with interesting and exciting experiences. By this time the fire suppression policy in this region had changed to the point where much larger suppression crews were employed on large fires. Instead of 30 or 40 men on a 75 thousand acre fire, as was the case on the Santa Barbara, we had at least two or three hundred men on this, a much smaller fire, at San Bernardino.

My work on the San Bernardino was much more in the nature of Supervision than it had been on the Santa Barbara, where I actually did as much

manual work as any of the other fire fighters. On the San Bernardino I acted either as crew leader or scout, or in some other supervisorial capacity,

Unfortunately, on the San Bernardino we were not as lucky as we were on the Santa Barbara. Two firefighters were burned to death on this fire and several other rather serious casualties occurred. On the morning that the two Mexicans were burned to death, I was acting in the capacity of Scout for the district ranger in charge of the fire, and contacted this crew of approximately 75 men in charge of two or three Forest officers, about 11 o'clock in the morning. At that time they were "cold trailing" the edge of the burned area, making safe any remaining hot spots or burning embers along the edge of the fire line, and the Ranger in charge of that crew reported that they anticipated no difficulty in handling their sect Within a half hour or so after my contact, however, the fire suddenly broke out in the unburned area a hundred yards or so below where the crew was working, and spreading rapidly up the steep mountainside toward the burned area, caught these two Mexicans who, in their excitement, instead of running into the burn, ran the other way into the brush covered terrain, and their lives were snuffed out so quickly that they did not realize what happened to them. All the other members of the crew escaped by retreating into the burned area without any difficulty, and it was clearly through panic and fright that these two men sacrificed their lives. It happened so quickly that everyone seemed to be in agreement that no one was at fault, but because of the depressed and disorganized influence that this tragedy had on the morale of the crew, they were brought into camp that afternoon and taken off the fire line, and replaced with a new crew. They were practically

Mexican peons, and perhaps had it been a crew of white men, their disorganization would not have been so acute.

Since the advent of the CCC in 1933, the job of fire suppression has been much better organized than ever before in the history of the Forest Service. It is a great advantage to be able to fight fire with organized crews used to working together under their regular foremen and leaders, who were well acquainted with the ability of every member of their crew, and who have had at least some training in fire suppression methods, and a great deal of training in all phases of safety observations, and while there have been a few casualties even in CCC crews in the past several years, I am of the opinion that the casualty rate must have been reduced very materially over what it used to be before most of our fire suppression was handled with CCC crews.

JOHN MUIR TRAIL:

As a monument to the memory of John Muir, the great naturalist and writer who spent years of his life in the solitude and environment of the Sierra which he loved so well, several members of the Sierra Club which he had helped to organized, proposed the construction of a trail between Mt. Whitney and Yosemite Valley, this trail to follow the crest of the Sierras as closely as was practicable. At first, there was no definite plan for financing such a proposed trail, which was to be nearly 200 miles in length, but in order to get the construction initiated, the Sierra Club decided to appropriate from their club funds the sum of $900.00, in 1914. This amount was supplemented with a few hundred dollars of Forest Service funds, and from the County of Fresno and the construction of the first section of the John Muir trail was begun in July, 1914, at the Junction of Cartridge Creek, with the Middle fork of Kings River in my district.

and a few hooks in my pocket, we cut a short willow pole and within a few minutes I caught the first Golden Trout that I had ever seen. The original plant in this watershed had been packed in about six years earlier over Bishop Pass, from Inyo County, and placed some six or eight miles further upstream.

There was, at that time, a very rugged trail over Bishop Pass which had been used by sheep men and even cattle men as a driveway, and service route, as they grazed their stock in the upper basins of Kings River. After spending about two weeks with the crew we finally got all the supplies packed in to the camp and had selected and laid out the route of the trail for a distance of about two miles upstream from Cartridge Creek. I recall that there were two different places in this narrow and very rugged canyon where snowslides had come off of the Mountain sides during the wi season, and built up such a field of hardpacked frozen snow that the river was completely covered over for a considerable distance - in one instance, at least, a quarter of a mile. The water, of course, was flowing under the snow which we estimated to be at least 50 feet deep, and during that whole season this larger snowdrift did not melt out. A pack train could have been crossed on it when the camp was moved out about the last of September.

Through the efforts of the officers of the Sierra Club, the California Legislature was induced to make an appropriation of $10,000 at its Session the following January, and the Forest Service agreed to assume the responsibility of administration and supervision of this construction project. The next year Sylvester Dehl, who had been my first District Ranger in 1907, was employed as foreman of the Muir Trail crew

which consisted of a cook, foreman and six men. Dehl had had a good deal of experience in hard rock mining, and some in trail construction, and did a very creditable job, considering the very difficult type of country and limited resources with which he had to work. In some instances, poles had to be hung with ropes on the face of the Granite Bluffs for the men to work with safety, as they drilled and blasted a trail out of the solid granite.

State Engineer McClure was induced to make an inspection of a portion of the proposed Muir Trail route and of the work that we had undertaken so far during the season of 1915, and as the result of his rather severe criticism of the low standards that we were using in the construction of this job, the work in the years to follow was done on a much higher standard.

Mr. McClure, who was an engineer by training and profession, rightfully took the stand that if a project were to be constructed as a memorial to the memory of John Muir, that it should be built on standards assuring its permanent public use, and advised us that steep grades should be kept down to the minimum consistent with the nature of the terrain, and that sufficient width should be provided to make it a safe trail for all classes of people and stock, who might be using it in the future. As the result of his suggestions, the work for the next few years was laid out on a maximum grade of 15 or 20 percent when that was at all possible to achieve.

Later, when the United States got into the World War, the California Legislature refused to consider appropriations for the continuance of the Muir Trail, at least while our country was engaged in this world conflict, and so for a period of a few years nothing was accomplished. Perhaps this was just as well for it gave us who had an opportunity to view the 30 miles or so of trail which had already been constructed, a chance to observe

how well it had stood up under the very limited use that it was subjected to at that time. We found that the action of the saddle and pack stock, in traveling the trail, together with the severe summer thunderstorms or melting snows in the early summer, were depreciating the trail at a rapid rate, but we also observed that where grades of between 10 and 15 percent had been obtained that the wear and tear was very much less apparent, and when funds were again available for resuming the construction of the Muir Trail, Supervisor Benedict asked me to take charge of the general supervision of the project. By that time I had been transferred to the Inyo as Supervisor of that Forest, but because of the much shorter distance from point of road accessibility on the Eastern side of the Sierra, it was much cheaper and easier to handle the supervision, and subsistence and supply of the camps from our side.

I obtained Mr. Benedict's approval to the policy of limiting grades to a maximum of between 12 and 15 percent as an objective. A great deal more attention was given to avoiding locations where serious erosion would occur and to the installation and construction of sufficient and adequate drainage to protect the trail from heavy erosion and selecting a location which would consider the greatest possibility of contacting outstanding scenic attractions, lakes or fishing streams, camp spots and horse feed. Because of the high altitude and heavy winter snow conditions prevailing on the route of the John Muir Trail, we were seldom able to establish camps and begin work before the first of July, and for the same reason, early storms forced us to move out about the last of September and since heavy snow had played such an important part in restricting the season of use or occupancy, of our trail camps, we had been forcefully impressed with the importance of selecting a trail location which would

avoid areas of heavy snowdrift and deepbanks of snow that might prevent the use of the trail until late in the summer season. Of all the construction projects that I have been associated with in my Forest Service career, few if any, have been a source of greater interest and pleasure, and I am especially proud of the fine standards of construction that have been used in the work accomplished during the seasons of 1937 and 1938.

As a climax to these many years of contact in the construction of the Muir Trail, I was chosen in 1938 to represent the Forest Service on the first Trail Rider Trip sponsored by the American Forestry Association in Washington, D. C., to be taken in California.

American Forestry Trail Rider trips were first organized in the early 1930's and taken in the Northern Rocky Mountains. As the interest of this type of summer recreation increased, they expanded the set-up to provide for as many as six or seven different trips to be taken in the United States and Canada during each season. It was my good fortune, and extreme pleasure, to have the opportunity of representing the Forest Service with Earl Kaufman, Associate Editor of the American Forestry Magazine, representing the Association on their first trip in California. I found him to be a very fine fellow, and we were also lucky in getting a packer of the caliber of Ike Livermore, of Ross, California, to handle the job of packing and subsisting this party of 17 trail riders.

Ike is a young fellow about 30 years old, a college graduate, and a man who has seen something of a great deal of the World, including Europe and Asia -- very versatile in his accomplishments, and with a keen desire to provide the finest type of service and entertainment for this group of trail riders recruited from all sections of the United States. The interest

had increased in the Kings River trip so that the party for 1939 had grown to 21 paid riders, plus the official Doctor, the Representative of the American Forestry Association, and myself, who was again chosen to represent the Forest Service.

On both trips there were several veteran riders of the American Forestry Trail Rider trips, some with a record of as many as four or five previous trips in other parts of the United States and Canada, and practically without exception the riders were all unanimous in their agreement that none of the other trips had anything finer in the way of ruggedness and expansive views of Granite Peaks and deep, cleft canyons than has this Kings Canyon trip through the Sierras via the John Muir Trail.

The people, taking the Trail Rider trips, assembled at Bishop, from which point they were taken by automobile to South Lake on the South fork of Bishop Creek, at an elevation of 9700 feet, where saddle and pack stock were awaiting them.

About six miles via the Bishop Pass Trail, reconstructed in 1938, brought the party through some of the most colorful scenery in the entire Sierra Country, to Bishop Pass, at an elevation of 12,000 feet. Descending by easy trail grades incorporating many switch backs, the first camp was pitched in LeConte Canyon, a section of the Middle fork of Kings River, at an elevation of 9,000 feet. A lay-over day was provided in the schedule for the second day out, in order to give the riders a chance to rest, and more or less adjust themselves to high elevations and camp life. Hiking, fishing and Camera Hunting were the means of entertaining themselves at that camp. The second day, proceeding Southward over the Muir Trail to the mouth of Palisade Creek, and thence ascending that watershed over some of the newly constructed Muir Trail, the second night's camp was pitched

at Palisade Lakes Basin, at an elevation of a little more than 11,000 feet. The next morning Mather Pass was ascended, and from its summit the rugged Western escarpment of the Sierra offers almost an unlimited number of Granite Peaks piercing the clear blue sky both to the North and South as far as the eye can see. This is the boundary between the Sierra and Sequoia National Forests, and continuing South camp was pitched that night on the shores of Bench Lake in what is called the upper basin of Kings River Canyon. This is one of the most beautiful lakes in the entire length of the Sierra-Nevada range, and both groups of trail riders have been so entranced with its charms and beauty that they have been disappointed that they could not lay over for a day or two at that camp site.

Since Mount Whitney, however, has seemed to us who have laid out the schedule for these trips to be the crowning glory of the entire trip, and the trail from Lone Pine Canyon to the Summit of Mt. Whitney to be the logical Southern terminous for such a trip, it had to be planned on rather a strenuous schedule and provision for only about three lay-over days could be provided during the two weeks trip.

In all, six mountain passes are negotiated in this section of the Muir Trail, with elevations ranging from 12,000 to 13,600 feet, and as a side trip, the opportunity is offered to visit Tulainyo Lake, at an elevation of 12,865 feet, said to be the highest lake in the North American Continent, and it is possible to ride a horse almost to the shore line of this lake, nestled on the very crest of the Sierra.

From its Eastern rim, which is only 150 feet or so above the water level, one gets an inspiring view of Owens Valley and the desert

ranges to the East of it, and from its Western rim at about the same elevation, the Kern River Canyon and peaks along the great Western Divide afford another grand view.

A perpetual snow and ice field along the South and Western rim of this lake add much to its charm and beauty. On the last day of the horse pack trip, lunch is taken on the Summit of Mt. Whitney at an elevation of 14,496 feet, the highest point in Continental United States, and the most ~~expansive~~ expansive view obtained in this entire trip, outstanding for its expansive views. This is the Southern terminus of the John Muir Trail.

While this digresses from the story of the John Muir Trail to a considerable extent, I think I should relate an incident that occurred on Mt. Whitney Summit last year, the 1939 trip.

We had in the party a rider by the name of William Williams, of New York, who was in his 77th year, and as he stood on the summit of Mt. Whitney, drinking in the glorious views, he was approached by a hiker who was making the climb to Mt. Whitney Summit on that day, and who asked him if he were Mr. Williams, and on being informed that he was, this man pulled a photograph out of his pocket which had been given to him in New York by Mr. Williams' sister, and it was a picture that she had taken from an airplane in a trip over the Himalaya Mountains in Asia, and on learning that this man was contemplating a trip to California and to the summit of Mt. Whitney, she thought that there might be a possibility that he would meet her brother under those unusual circumstances, and

so gave him this picture to be presented if the contact were made.

This is one of the most outstanding incidents to come to my knowledge of proof that the world is indeed a small place, and I want to say, in conclusion, that no rider displayed any greater traits of sportsmanship and good fellowship throughout the trip than did this 77 year old man Williams. I asked him how he accounted for his good health and physique at his age, and he replied by saying that he began, early in his life, to prepare and train himself for just such trips as that, and after his return to New York he sent me a couple of booklets which he had had printed many years ago describing his experiences in climbing the Alps in Switzerland when he was just a young man.

Most of the entire length of the John Muir Trail has now been completed to satisfactory standards, but there still remains, perhaps, 30 or 40 miles of the nearly 200 miles of this trail to be brought up to better standards when the opportunity and funds are available.

It is indeed a fitting monument to the memory of a man who loved the Sierras as John Muir did, and will no doubt help to perpetuate his name in the minds of thousands of people who will take, at least, sections of this trip annually, as time goes on.

In all the construction work on the John Muir Trail I know of only one fatal accident, which occurred in a National Park service camp just under Foresters Pass, when a blast which was set off dislodged a large granite boulder below which two or three trail workers had gone for protection from flying debris from the blast. Two of these workers were severely injured, one of them so seriously that he died from his injuries a few days later. The other was packed out on a stretcher and

recovered. One other man died in a Park Service camp, near the summit of Mt. Whitney, but his death was caused by heart disease, possibly aggravated by the high altitude, and strenuous climatic conditions found there.

The Forest Service was fortunate enough to have no deaths or fatal accidents in any of their camps, and very few minor accidents. We had a requirement, however, during all the later years of Muir Trail construction, that each man hired as a trail worker at these high elevational camps should be examined by a competent physician with particular regard to the condition of his heart and blood pressure, and as a result of these examinations, quite a few applicants were not employed by us.

FOREST AIR PATROL:

Following the Armistice in 1918, the Army Air Service was anxious to find activity that would provide more interest and definite requirements for their flying personnel, and a few of the Army Air Service officials were requested to investigate the possibility of laying out some definite air patrol routes for the purpose of seeing whether or not it was practical to discover and report forest fires by this means.

A Major Smith was one of the men assigned to this duty, and made cross-country flights over a great deal of the National Forest area in the West. It was decided that it was practical to fly Forest Air patrols and that beneficial training would result to the Army personnel in the Air Service as well as providing the Forest Service with a valuable service, and so a few trial patrols were established in 1919. In most instances, the pilots were equipped with "Jennys",

(the old training ships used by the Army Air Service), which proved to be satisfactory so long as the altitudes of the area to be patrolled were not too high. The ceiling of this type plane, would not permit it to be flown with safety over rugged terrain of high altitudes, however, and they had a very short gliding angle so that if anything happened to cause the motor to cut out the pilots had to select a landing place within a comparatively small radius. The "D.H." ships that had proven valuable in much of the war time flying were powered with Liberty motors, had a much higher ceiling, and a much greater gliding angle with their flat wing surfaces than had the "Jennys", and so after a few months trial the D.H's were substituted.

During this trial flight work, a couple of officers and ships were assigned to a small base near Fresno, and Supervisor Benedict and Ranger Mal McLeod were taken over the Sierra Forest by the pilots to get an idea of the fine view to be obtained from the forest from an airplane. I happened to go out to this landing field early in September, 1919, and the pilot in charge, who was anticipating a flight of Army airplanes to land there that morning from Rockwell Field, noticed my Forest Service uniform clothes, and asked me where I was stationed. On being informed that I was District Ranger in charge of the Kings River District on the Sierra National Forest, he asked me if I had been up in a plane, and on being informed that I had not, he invited me to take a trip over my district some day, and offered to take me that day if it were not that he was expecting these other ships to land within an hour or so. A few minutes later he came around, however, and said that he had just been informed by a

long distance telephone call that this flight had been delayed for a couple of hours, and that there would be plenty of time for him to take me up for a short trip over my district, and so without much thought and rather with surprise, I found myself in a flying suit, taking off on my first airplane trip. It proved to be an exhilerating experience, and I was very much surprised and pleased with the wonderful view that one could get of the country from an airplane.

Later it was decided to hold a sort of training school at March Field in Southern California, during the month of February, 1920, to which ten Forest officers from Regions 1, 6 and 5 might be detailed. It was decided to give the men who were selected for this detail a rather extensive training in what could be done by airplane patrol and in sending and receiving with radio sets, which they hoped to install in the planes. It was anticipated that some of them might serve as observers for the air patrol work, which it was proposed to develop in the west during the next fire season. I was one of the ten men selected from the California region to attend this school at March Field, and it proved an interesting and instructive detail.

In May, 1920, a camp was established at Fresno with five pilots and about twenty enlisted men to man and care for the several DeHaviland airplanes assigned to that patrol base.

I was assigned as Liaison officer and acted as observation officer in making flights over the North and South patrols conducted from that point, acquainting each of the pilots with as many physical features and names as I could, as we flew the Southerly course over the Sierras to Bakersfield, and the Northerly course as far as Sacrament

I was stationed at Fresno for about six weeks until I was relieved by a young fellow named Charles Mainwaring.

The airplanes were found to have some advantages over the lookouts in that they had a much better view of the country to be patrolled, particularly at times when heavy haze or smoke drifted in to restrict the vision of the lookout men. Haze or smoke builds up more or less in layers over the country and usually the Canyons are filled with a fairly thick layer through which the look-out men cannot see to good advantage. The Observer from a plane, however, flying over the top of this haze, has the advantage of looking down through a comparatively thin layer, and therefore he has little difficulty in locating any smoke or other object in which he might be in search of. The disadvantage of the Airplane, of course, was the fact that after the patrol was made a fire could start within a few minutes and no opportunity would be given for the air patrolman to pick it up until his next flight, which might be several hours or even a whole day later, whereas the look-out man being on duty continually had a much greater chance of picking up a smoke soon after its inception than would the airplane patrol.

Radio instruments at that time had not been developed to a satisfactory degree of performance, and considerable difficulty was also encountered in either sending or receiving reports by radio from the plane. I carried on some experiments in dropping messages with a fair degree of success, and I believe that others acting as observers also resorted to dropping messages when they wanted to report fires.

After these two seasons of experimental airplane flying, it was finally decided that the only practical value of air patrols that would justify the heavy expense of operating them was Reconnaissance

flights over going fires for the purpose of determining the actual conditions of the fire and for a quick examination of a going fire by some officer directly responsible for its control, in order to give him a birds-eye view of all sides of the fire so that plans for its attack and control could be made more intelligently.

As a result of this early day Army air service patrol, most of the Western regions now have definite arrangements with Commercial flying services for the rental of flying equipment when needed, or justified, in fire control work.

During the Army Experimental Forest Patrol flying, a few serious and fatal accidents occurred. No one was injured, however, either at March Field or at Fresno, during my fairly short association with this activity, and I am glad to have had a part in this experimental air patrol project.

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End.